

MeetingReport

Microscopy & Microanalysis 2011



David Giovannucci, Program Chair

Department of Neurosciences, University of Toledo College of Medicine, Toledo, OH 43614

David.Giovannucci@utoledo.edu

Like that nourishing Music City confection, this year's Microscopy & Microanalysis Meeting, held August 7–11 in Nashville, was a GooGoo Cluster of top-notch science and networking. M&M is the annual meeting for the Microscopy Society of America, the Microanalysis Society, and the International Metallographic Society. It is the premier conference for microscopists working in the physical, life, and analytical sciences. This year's conference attracted 1,607 scientific attendees from 35 countries; the total number of attendees was 2,629. The perennially successful exhibitors' floor was again noteworthy with 113 companies providing the opportunity to wander 362 booths (9% more than the previous year) occupying 36,200 square feet with state-of-the-art instrumentation and publications.

The Renaissance Nashville Hotel Grand Ballroom was a fitting venue for the Sunday evening reception where new and familiar colleagues were able to get acquainted, catch up on the latest science and innovations, share memories, forge new collaborations, and relax, mingle, and nosh. By the next morning, the same venue was reconfigured for the opening plenary session that attracted an audience of some 1,200 scientists, technologists, students, and guests. The society presidents, Nestor Zaluzec (MSA), John Henry J. Scott (MAS), and Nat Saenz (IMS) officiated at this session that included two plenary talks, the announcement of new MSA fellows, and the presentation of named awards.

Both plenary speakers presented work with the common theme of pushing the limits of resolution. The first plenary lecture, sponsored by MAS, was titled "*In-situ* X-ray Micro/Nanoprobe Characterization of Materials: How Billion Dollar Synchrotron Sources are Pushing the Limits of Structure and Chemical Resolution in 3D" by Gene E. Ice of the Oak Ridge National Laboratory. Dr. Ice explained how ultra-brilliant X-ray sources and nondestructive micro/nanoprobe methods are being applied to long-standing issues in materials physics. Ice then, in true Tennessee fashion, treated the crowd to a song about the wonders of X-ray nanoprobe analysis. The



Figure 1: Plenary speaker Gene Ice entertains the crowd.

MSA plenary speaker was Stefan W. Hell of the Max Planck Institute for Biophysical Chemistry and director of the Department of NanoBiophotonics. Professor Hell presented "Nanoscopy with Focused Light" in which he introduced the concept of stimulated emission depletion microscopy that has shattered the diffraction limit and allowed light microscopy to reach resolutions at the nanometer scale.

The meeting continued with both thematically linked and independent symposia. For example, there were symposia presentations by researchers using advanced fluorescence techniques such as super-resolution, single-molecule imaging, intra-vital and live cell imaging, and total internal reflection microscopy. Other popular sessions were offered in the symposium "Opportunities and Advances for *In-situ* Experiments in Electron-Optical Instruments." There also were two named symposia titled "A.V. Crewe Memorial Symposium: From Images of Single Atoms to Single Atom Spectroscopy and Beyond" and "Microanalysis at 60 years: A Symposium Dedicated to Raymond Castaing." The session on "3D Structure of Macromolecular Assemblies, Cellular Organelles, and Whole Cells" proved to be a strong draw, as it was at the 2010 meeting.

Approximately 200 invited and 800 contributed papers were organized into 17 Instrumentation and Techniques symposia, 10 Biological Sciences symposia, and 9 Physical Sciences symposia. In addition, there were Technologist Forum sessions and a variety of educational short courses, workshops, and outreach activities. This year the poster sessions occupied some 21,840 square feet, and each day's session ended with MSA president Nestor Zaluzec announcing the student poster winners to lively crowds.

In the end, Music City provided an exciting backdrop for a successful meeting. We look forward to next year's meeting to be held in Phoenix, Arizona, July 29–August 2, 2012.



Figure 2: Plenary speaker Professor Stefan Hell.



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